# U.S. Department of the Interior • U.S. Geological Survey

# MINERAL INDUSTRY SURVEYS

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## MANGANESE IN JUNE 1996

In June, reported consumption of manganese ore containing 35% or more manganese, exclusive of that at iron and steel plants, was 36,200 metric tons, which was about 5% less than that of the previous month, according to the U.S. Geological Survey. This brought the year-to-date total to 213,000 tons. These figures increase to 40,700 and 240,000 when estimates for annual respondents are added on the basis of 1994 data. Corresponding industry stocks of ore at the end of the month were estimated as 301,000 tons, which includes an estimate for annual respondents based on 1994 data. This was a decrease of somewhat less than 6% in comparison with the corresponding figure for stocks at the end of May. (Data for the most recent 13 months are graphed on page 3.)

The next report of data on domestic consumption and stocks of manganese ferroalloys and metals will pertain to the April through June quarter of 1996.

#### **Notices**

<u>Early availability of foreign trade statistics via FaxBack:</u> The May trade data appearing in this report were placed on FaxBack in preliminary form as of July 26. The FaxBack document number for these preliminary tables was 420205.

Availability of manganese monthly report via the World Wide Web: This monthly report is obtainable via the World Wide Web through the Minerals Information home page address given above: http://minerals.er.usgs.gov/minerals

Foreign trade data for June will appear in a subsequent report. Among the data for May tabulated in this report, the monthly imports of manganese dioxide were most likely the greatest ever, mainly because of large receipts from Australia. Among exports, those of ore were the greatest since September 1993 and those of silicomanganese the least since December 1994.

The Defense Logistics Agency (DLA), U.S. Department of Defense, reported for June a cash disposal from the National Defense Stockpile under DLA-MET-101 of 457 tons of electrolytic manganese metal, all to ATI Alloys Inc., McKees Rocks, PA.

In Brazil, the Caemi group closed the export-oriented manganese ferroalloy plant of its subsidiary, Cia. Ferroligas do Amapá (CFA), according to Metal Bulletin, issue of June 3. This plant was in the Porto de Santana area in northeastern Brazil and had an annual capacity for high-carbon ferromanganese of 23,000 tons. In operation only since 1990, CFA had produced just ferromanganese until December 1995, when production of silicomanganese was started. CFA had operated at a loss in 1994-95 and may now be sold. Its ferroalloy plant was being supplied with manganese ore from affiliated mining operations at Serra do Navio, also in Amapá Territory.

France's ERAMET carried through with its plan for acquisition of a significant shareholding of 46% in Compagnie Minière de l'Ogooué S.A. (COMILOG), the manager of a major production of manganese ore at the Moanda Mine in Gabon, according to the American Metal Market (AMM), issue of June 24. <u>Update.</u>--As noted in AMM's issue of August 2, ERAMET and COMILOG have begun a study of the feasibility of constructing a ferromanganese plant with annual capacity of 100,000 tons near the Moanda Mine. This proposal revives a possibility whose consideration dates back more than 20 years.

As reported in the June 11 issue of the TEX Report, South Africa's Samancor Ltd. entered into an agreement with Japan Metals & Chemicals Co. Ltd. (JMC) and Mitsui & Co. Ltd. to set up a joint venture company in South Africa for the production of refined manganese ferroalloys. The company, to be called ADVALLOY (TEX Report, issue of July 5), was composed of Samancor, 50%; JMC, 35%; and Mitsui, 15%. An annual production of about 75,000 tons was projected for ADVALLOY, consisting mostly of medium- and low-carbon ferromanganese plus ultra-low-carbon grades of ferromanganese and silicomanganese. A 30-ton converter and two relatively small electric furnaces are to be installed at Samancor's manganese ferroalloy plant at Meyerton. Trial production was expected to begin late in 1997 followed by commercial production in 1998 using high-carbon ferromanganese and silicomanganese supplied by Samancor. Connected with this project was Samancor's agreement to acquire the Midland plant of Polifin Ltd. (TEX Report, issue of June 17). This plant, recently shut down, had been producing calcium carbide, but Samancor's plan would be to use it instead to produce as much as 120,000 tons per year of silicomanganese. Silicomanganese from the Midland plant would replace the silicomanganese from Samancor's Meyerton plant being used in the ADVALLOY joint venture.

 ${\bf TABLE~1}$  SELECTED U.S. FOREIGN TRADE IN MANGANESE 1/

(Metric tons, manganese content) 2/

	Impor	ts for consumption	Exports				
	Ore and	Ore and Ferroalloy		Ferroalloy			
	dioxide	and metal	Total	Ore	and metal	Total	
1995:							
May	8,330	29,500	37,900	197	2,290	2,490	
January-May	64,500	187,000	252,000	3,710	9,300	13,000	
1996:							
January	8,860 3/	47,100 3/	56,000	386	1,540	1,930	
February	1,410 3/	36,200 3/	37,600	1,620	1,670	3,290	
March	14,400 3/	46,900 3/	61,300	466	1,610	2,080	
April	32,500	61,400 3/	93,900	1,250	1,760	3,010	
May	20,400 3/	46,800	67,200	2,240	1,630	3,870	
Total	77,500	239,000	316,000	5,970	8,210	14,200	

<sup>1/</sup> Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.

 ${\bf TABLE~2}$  U.S. IMPORTS FOR CONSUMPTION OF SILICOMANGANESE IN MAY 1996 1/

#### (Metric tons)

					Year to date	
	Gross	Mn	Customs	Gross	Mn	Customs
Source	weight	content	value	weight	content	value
Argentina	2,640	1,720	\$1,660,000	7,490	4,870	\$4,910,000
Australia	6,630	4,430	4,840,000	25,200	16,900	18,100,000
France	7,210	4,770	2,320,000	15,900	10,500	8,480,000
Georgia				1,260	884	701,000
India	1,540	1,020	980,000	24,200	15,700	15,200,000
Kazakstan				4,000	2,290	2,300,000
Macedonia	1,570	1,020	704,000	11,000	7,460	4,910,000
Mexico	2,750	1,790	1,850,000	9,330	6,080	6,440,000
Norway	1,950	1,180	1,950,000	3,400	2,020	3,260,000
Poland	3,040	2,100	2,050,000	3,040	2,100	2,050,000
Romania				8,160	5,480	4,850,000
Russia				1,200	778	597,000
South Africa	9,590	6,380	6,340,000	43,000	29,300	27,600,000
Spain				801	498	739,000
Venezuela	2,600	1,720	1,610,000	10,200	6,660	7,110,000
Total	39,500	26,100	24,300,000	168,000	111,000	107,000,000
Total, general imports	39,500	26,100	24,300,000	172,000	114,000	109,000,000

<sup>1/</sup> Data are rounded to three significant digits; may not add to totals shown.

<sup>2/</sup> As reported except as estimated for imports of manganese dioxide and manganese waste and scrap and for exports from gross weights.

<sup>3/</sup> All or part of these data have been referred to the Bureau of the Census for verification.

 ${\bf TABLE~3} \\ {\bf U.S.~IMPORTS~FOR~CONSUMPTION~OF~FERROMANGANESE~IN~MAY~1996~1/}$ 

#### (Metric tons)

					Year to date	
	Gross	Mn	Customs	Gross	Mn	Customs
Source	weight	content	value	weight	content	value
Low carbon:	_					_
Bangladesh				28	24	\$16,700
Belgium				16	13	9,230
Brazil				20	17	39,000
Canada	<del></del>			42	34	53,000
Italy	722	643	\$1,170,000	1,970	1,770	3,190,000
Japan	301	258	374,000	1,980	1,630	2,130,000
Norway	262	212	280,000	370	299	461,000
South Africa	420	390	730,000	1,420	1,310	2,420,000
Total, low carbon	1,700	1,500	2,560,000	5,850	5,090	8,320,000
Total, general imports						
of low carbon	1,700	1,500	2,560,000	5,850	5,090	8,320,000
Medium carbon, 1%-2% C:						
Brazil				1,330	1,060	1,200,000
China	<del></del>			4,010	3,230	3,100,000
France	- 			2,500	2,040	1,960,000
Japan	5,100	3,970	4,060,000	15,100	12,200	11,900,000
Mexico	1,540	1,240	1,290,000	11,000	8,870	9,170,000
South Africa	- 			1,910	1,550	1,690,000
Total, m.c., 1%-2% C	6,640	5,200	5,350,000	35,900	28,900	29,000,000
Total, general imports						
of m.c., 1%-2% C	6,640	5,200	5,350,000	35,900	28,900	29,000,000
High carbon:						
Australia	4,290	3,260	\$1,890,000	18,600	13,900	7,460,000
Brazil	2,780	2,130	1,230,000	8,780	6,420	3,660,000
France	4,000	3,150	1,880,000	38,300	30,100	18,500,000
Mexico	- 			6	5	3,650
Norway	39	31	51,100	56	45	66,500
South Africa	5,810	4,570	2,660,000	48,900	38,200	22,200,000
Total, high carbon	16,900	13,100	7,710,000	115,000	88,700	51,900,000
Total, general imports	-					
of high carbon	16,900	13,100	7,710,000	115,000	88,700	51,900,000
Grand total	25,300	19,900	15,600,000	156,000	123,000	89,200,000
Grand total, general imports	25,300	19,900	15,600,000	156,000	123,000	89,200,000

<sup>1/</sup> Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.

 ${\it TABLE~4} \\ {\it U.S.~IMPORTS~1/OF~MANGANESE~ORE~(20\%~OR~MORE~MN)~IN~MAY~1996~2/} \\$ 

#### (Metric tons)

	20% - 47%	20% - 47% Mn		re Mn	Total		
	Gross	Mn	Gross	Mn	Gross	Mn	
Source	weight	content	weight	content	weight	content	
Gabon			24,100	11,700	24,100	11,700	
Mexico	15,600	5,790	60	39 3/	15,600	5,830	
Total	15,600	5,790	24,100	11,700	39,700	17,500	
Year to date:							
Australia			37,400	18,300	37,400	18,300	
Gabon			75,100	31,600	75,100	31,600	
Mexico	19,100	7,090	80	53	19,200	7,140	
South Africa			27,000	12,900	27,000	12,900	
Total	19,100	7,090	140,000	62,800	159,000	69,900	

<sup>1/</sup> Quantities for general imports and imports for consumption are identical.

Source: Bureau of the Census.

<sup>2/</sup> Data are rounded to three significant digits; may not add to totals shown.

<sup>3/</sup> All or part of these data have been referred to the Bureau of the Census for verification.

TABLE 5 U.S. IMPORTS FOR CONSUMPTION OF MANGANESE DIOXIDE AND MANGANESE METAL IN MAY 1996 1/

#### (Metric tons, gross weight)

		Manganese	dioxide		Manganese metal				
				Year to date		rought	Other		
		Customs		Customs					
Source	Quantity	value	Quantity	value	Quantity	Year to date	Quantity	Year to date	
Australia	3,990	\$5,650,000	8,840	\$12,600,000					
Austria			2	4,080					
Belgium	196	305,000	536	915,000					
Brazil			254	349,000					
Canada			5	7,940			1	7	
China	17	19,600	17	19,600	120	340			
France	- 						13	43	
Germany			26	114,000			58	132	
Ireland	408	560,000	2,510	3,500,000					
Japan			6	16,400					
South Africa			153	240,000	660	3,360		260	
Ukraine						20			
United Kingdom	160 2/	224,000 2/	360	504,000			(3/)	152	
Total	4,770	6,760,000	12,700	18,300,000	780	3,720	72	594	
Total, general imports	4,770	6,760,000	12,800	18,400,000	834	3,990	72	594	

<sup>1/</sup> Data are rounded to three significant digits; may not add to totals shown.

Note: Imports for consumption of metallic manganese waste and scrap totaled 3 tons, all of which was from Canada, to give a year to date total of 106 tons.

Source: Bureau of the Census.

 ${\it TABLE~6}$  U.S. EXPORTS OF MANGANESE ORE (20% OR MORE MN), FERROMANGANESE, SILICOMANGANESE, AND MANGANESE METAL BY COUNTRIES OF DESTINATION IN MAY 1996 1/

#### (Metric tons, gross weight)

			Ferroma	anganese,				
	Manga	Manganese ore		r less C	Silicomanganese		Manganese metal 2/	
	May	Year to date	May	Year to date	May	Year to date	May	Year to date
Australia		142				2		
Belgium	1,390	2,090					74	74
Bolivia		3						
Brazil				12			3	46
Canada	249	2,140	694	2,830	377	2,920	126	445
China	1,640	4,000						
Colombia				12			3	3
El Salvador		354						
France			94	94			25	128
Germany								76
Hong Kong								1
India	77	153						
Italy							8	16
Japan	549	1,100					96	377
Korea, Republic of		519					16	79
Mexico		134	53	106	4	255	16	210
Netherlands						133	91	324
Sweden	571	1,140					18	35
Trinidad and Tobago		159					(3/)	(3/)
United Kingdom		(3/)					118	717
Venezuela				4				
Total	4,470	11,900	841	3,060	381	3,310	596	2,530

<sup>1/</sup> Data are rounded to three significant digits; may not add to totals shown.

Note: Exports of ferromanganese with more than 2% carbon totaled 148 tons, of which 119 tons went to Canada, 18 tons went to the Republic of Korea, and 11 tons went to Mexico, to give a year to date total of 1,360 tons.

Source: Bureau of the Census.

<sup>2/</sup> All or part of these data have been referred to the Bureau of the Census for verification.

<sup>3/</sup> Less than 1/2 unit.

 $<sup>2/\,\</sup>mbox{Includes}$  manganese-aluminum, some other alloys, and waste and scrap.

<sup>3/</sup> Less than 1/2 unit.

TABLE 7

U.S. FOREIGN TRADE IN SELECTED MANGANESE CHEMICALS IN MAY 1996, BY CLASS 1/

				Year to date p/2/		
			Principal sources			Principal sources
			and destinations:			and destinations:
	Gross weight	Value 3/	gross weight (metric tons);	Gross weight	Value 3/	gross weight (metric tons);
Class	(metric tons)	(thousands)	value (thousands) 3/	(metric tons)	(thousands)	value (thousands) 3/
Imports for consumption:						
Manganese oxides other than dioxide	110	\$282	Japan 49; \$155	433	\$1,080	South Africa 180; \$469
Sulfates, basket category,			-			
including manganese sulfate	1,960	\$1,170	Mexico 921; \$605	9,850	\$5,550	Mexico 7,310; \$3,640
Potassium permanganate	165	\$317	Czech Republic 54; \$102	458	\$862	Czech Republic 234; \$438
Manganites, manganates, and						
other permanganates				8	\$24	Canada 8; \$24
Exports:						
Manganese dioxide	229	\$212	Canada 115; \$53	1,440	\$1,610	Canada 705; \$329
Manganese oxides other than dioxide	570	\$559	Canada 304; \$132	3,280	\$3,330	Canada 1,480; \$647
Sulfates, basket category,						
including manganese sulfate	1,890	\$1,490	Canada 1,470; \$492	8,900	\$5,910	Canada 7,320; \$2,360
Potassium permanganate	37	\$136	Germany 31; \$117	257	\$631	Germany 121; \$297
Manganites, manganates, and						
other permanganates	7	\$126	Taiwan 5; \$108	118	\$564	Germany 60; \$235
/B 1: :						

p/ Preliminary.

Source: Bureau of the Census.

<sup>1/</sup> Data are rounded to three significant digits.

<sup>2/</sup> May include revisions to previous months' data.

<sup>3/</sup> For imports, Customs value; for exports, f.a.s. value.